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Full

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
|-----------------|-------------|----------------------|---------------------|
| 09/555,140 | 08/03/00 | KLEIN | G 178/48916 |

IM22/0720
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EXAMINER

SAVAGE, M

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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1723

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DATE MAILED: 07/20/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

| | | | |
|------------------------------|-------------------------------|------------------------------|--|
| Office Action Summary | Application No. 09/555,140 | Applicant(s) KLEIN ET AL. | |
| | Examiner Matthew O. Savage | Art Unit 1723 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-35 is/are pending in the application.
 4a) Of the above claim(s) 25-35 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 13-24 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- | | |
|---|--|
| 15) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 18) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 16) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 19) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 17) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____. | 20) <input type="checkbox"/> Other: _____ |

Applicant's election of species I in Paper No. 8 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

New claim 35 has been withdrawn from consideration as being directed to non-elected species I.

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the limitations recited in claims 23 and 24 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Claims 23 and 24 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The concept of disposing the filter element in a lubricating oil circuit of an internal combustion engine as recited in claim 23 and disposing the filter element in a fuel line of an internal combustion engine as recited in claim 24 lack basis in the original specification and are considered new matter.

The concept of having more than one cellulose containing layer in the case that the inflow layer includes of synthetic fibers as implied in claim 21 is considered new matter.

Claims 14, 16, and 18-20 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The specification fails to adequately disclose how to make the filter element having the recited weight per unit area values of the inflow and discharge layers as recited in claims 14 and 16 because thickness or density of the inflow and discharge layers has not been disclosed.

The specification fails to adequately disclose the methods of joining the filter layers as recited in claims 18-20.

Claims 13-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding lines 9-10 of page 13, it is unclear as to what type of paper a "predominantly cellulose containing filter paper" implies.

On line 4 of claim 14, it is unclear as to whether or not "calendered" and "compressed" produce the same or different filter structures.

Regarding claim 21, it is unclear as to how the cellulose containing filter layers can include up to 50% synthetic fibers in the case that the term "predominantly cellulose" recited in claim 1 implies more than 50% cellulose.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13, 15, 16-18, 21, and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Kadoya.

With respect to claim 13, Kadoya discloses a filter element (see FIGS. 1-6) having a plurality of layers 5, 2 joined together (e.g., by thermal fusing, see lines 1-4 of col. 3), the successive layers in the flow direction exhibiting an increasing degree of separation and a decreasing degree of storage capacity (see lines 5-38 of col. 3), the inflow layer 5 being comprised of synthetic fibers (e.g., rayon and polyester, see lines 67-68 of col. 2) and the discharge layer 2 being comprised of a predominantly cellulose containing filter paper (e.g., linter and pulp, see lines 65-66 of col. 2).

Concerning claim 15, Kadoya discloses at least three medium layers joined together as recited in the claim (see FIGS. 3-6).

As to claim 16, Kadoya discloses an intermediate medium layer 5b (see FIGS. 3-6).

Regarding claim 17, Kadoya discloses a star folded filter element (see FIG. 7).

With respect to claim 18, Kadoya discloses layers of filter media that are welded together (see lines 1-4 of col. 3). The limitation of the layers being welded by ultrasound relates to a method of making a filter and carries no patentable weight.

Regarding claim 21, Kadoya includes a cellulose containing filter layer including up to 50% of synthetic fibers (e.g., rayon fibers, see lines 65-68 of col. 2).

With respect to claim 23, Kadoya discloses the concept of disposing the filter element in a lubricating oil circuit of an internal combustion engine (see lines 8-10 of col. 1).

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 14, 18, 19, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kadoya.

With respect to claim 14, Kadoya fails to specify the recited weight per unit area values for the inflow and discharge areas, however, such modifications would have been obvious in order to optimize the degree of filtration required for a particular application. The term "melt-blown" relates to a method of making a non-woven web and carries no patentable weight. The use of melt blown non-woven mediums is well known in the filtration art and would have been obvious in order to facilitate fabrication of the web.

Kadoya fails to specify welding the layers of filter media together with ultrasound as recited in claim 18, joining the layers of filter media by surface pressure during a folding process as recited in claim 19, however, such methods of joining are known in the filter fabrication art and would have been obvious in order to optimize the filter for a particular application.

With respect to claim 24, Kadoya fails to specify disposing the filter element in the fuel line of an internal combustion engine, however, such a modification would have been obvious because it is well known to use the same paper based filter elements in lubricating oil circuits and fuel lines of internal combustion engines.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kadoya in view of JP 63-278517.


Kadoya fails to specify gluing the layers of filter media with a powdered adhesive as recited in claim 20. '517 discloses using a powdered adhesive in the form of polyethylene powder for gluing together layers of an analogous filter element and suggests that such an arrangement provides a secure bond between the layers. It would have been obvious to have modified the filter element of Kadoya so as to have included a powdered adhesive to glue together the layers of filter media as suggested by '517 in order to provide a secure bond between the filtering layers.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kadoya in view of Pall '881 or Girondi.

Kadoya fails to specify the cellulose containing filter layer as including polyester or glass fibers. Both Pall (see lines 16-26 of col. 3) and Girondi (see lines 65-67) teach adding polyester or glass fibers to cellulose containing paper and suggest that the fibers optimize the filter media for a particular application. It would have been obvious to have modified the cellulose containing layer of Kadoya so as to have included glass or polyester fibers as suggested by Pall or Girondi in order to optimize the filter for a particular application.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Savage whose telephone number is (703) 308-3854. This examiner can normally be reached from Monday through Friday from 7:00 AM to 3:30 PM.


Matthew O. Savage
Primary Examiner
Art Unit 1723

M. Savage
February 23, 2001